Antonia Mugisa

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LinkedIn | **Github** | **Website**

EDUCATION

Dalhousie University   **Halifax, NS**
Bachelor of Computer Science   *2020 - 2025*
- **Relevant Coursework:** Mobile Computing, Operating Systems, Programming Languages, Usable Security & Privacy, Software Engineering, Theory of Computer Science, Algorithms
- **Organizations & Clubs**: Women in Technology Society member, Computer Science Society member, Her Campus Dalhousie social media manager, ColorStack Organization Member

EXPERIENCE

Avanade   **Halifax, NS**
Software Engineer Intern   *May 2024 - August 2024*
- Investigated the development of a Retrieval-Augmented Generation pipeline by integrating Azure Cognitive Search with OpenAI's LLMs to retrieve and generate responses with 90% accuracy from given large datasets.
- Designed and developed a lease document reader leveraging Azure's AI services, including Azure Form Recognizer and Azure Cognitive Search, enabling efficient indexing and querying of information.
- Conducted research and analysis on OpenAI's LLM capabilities, optimizing embedding models and contributing insights to enhance the performance of the Retrieval-Augmented Generation pipeline up to 95% accuracy.
- Provided technical support to internal teams by logging, tracking and documenting cloud architecture and deployment procedures, sharing insights to improve future AI model integration and optimization.

Avanade   **Halifax, NS**
Software Engineer Intern   *May 2023 - August 2023*
- Assisted in the migration of client's on-premises services to the cloud by collaborating with cross-functional teams to optimize the client's architecture for Azure environments resulting in 100% deployment in Azure.
- Implemented and managed cloud services including compute, storage (Azure Blob Storage), and networking to support the client's large-scale AI applications.
- Automated deployment processes using PowerShell, Kubernetes, Docker, and Terraform, ensuring continuous integration and deployment (CI/CD) pipelines for cloud infrastructure.
- Contributed to the implementation of security measures such as identity and access management (IAM), ensuring compliance with security standards and conducting risk assessments.
- Developed automation scripts and orchestrated cloud workflows to manage dependencies across multiple cloud services, improving deployment efficiency by up to 85% quicker response times.

PROJECTS

Emotify | **Github** | **Hackathon**   **ReactJS, NextJS, Firebase Database, Gemini-AI**
- Implemented an AI calendar assistant using Gemini-AI, Tailwind CSS, Google Firebase and mood check-in extension for existing calendar apps, designed to improve the mental and physical wellbeing of students and working professionals over two days, placing 3rd overall in the hackathon.
- Developed RESTful API endpoints to support core features of a mood-based playlist generator, enhancing backend functionality and scalability for production use.
- Spearheaded the design and implementation of a robust authentication and authorization system using Express.js, MongoDB, and JWT, ensuring secure access for different user roles (customer, admin).

Personal Website/Portfolio | **Github**   *HTML, CSS, ReactJS, JavaScript*
- Implemented a modern and visually appealing user interface, demonstrating proficiency in HTML and CSS for effective front-end development.
- Enhanced user interactivity by integrating JavaScript features such as form validation, dynamic content updates, and input feedback.
- Customized website features, including image galleries, contact forms, and dynamic animations to enhance user experience.
- Focused on UX through layout restructuring and visual hierarchy principles, which led to more intuitive navigation and increased time-on-site.
- Built reusable code modules and applied best practices in web design, streamlining future development and improving maintainability.

TECHNICAL SKILLS

- **Languages:** Python, Java, C/C++, JavaScript (ES6+), TypeScript, HTML, CSS, SQL, Swift, Terraform, Bash
- **Frameworks & Tools:** ReactJS, Node.js, Express.js, Next.js, Tailwind CSS, Bootstrap, Redux, Jest, JUnit
- **Databases:** MongoDB, MySQL, PostgreSQL, Firebase Realtime DB, Firestore
- **DevOps & Infrastructure**: Docker, CI/CD pipelines, REST APIs, GraphQL, Terraform, Linux CLI
- **Other Skills:** Agile/Scrum, Object-Oriented Programming, Debugging, Unit Testing, Cross-platform Development

CERTIFICATIONS

Microsoft Certified: **Credential ID**
- Azure Fundamentals: AZ-900   69A9537704D42A35
- Azure Data Fundamentals: DP-900   610B490EF0A85DCF
- Azure Artificial Intelligence Fundamentals: AI-900   9C593A31AF418570
- Azure AI Engineer Associate: AI-102   85681882AC1EBD15